



NORLITE, LLC

628 SO. SARATOGA STREET
PO BOX 684
COHOES, NY 12047
PHONE: (518) 235-0401
FAX: (518) 235-0233

October 1, 2014

Ms. Nancy Baker
Deputy Regional Permit Administrator
New York State Department of Environmental Conservation
Region 4
1130 North Westcott Road
Schenectady, NY 12306-2014

RETURN RECEIPT REQUESTED VIA EMAIL

Mr. Robert Buettner
Air Compliance Branch
United States Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866

RETURN RECEIPT REQUESTED VIA EMAIL

Re: Norlite Corporation-MACT Excessive Exceedances Report
Kiln 1: 08/28/14 – 10/01/14
Kiln 2: 08/28/14 – 10/01/14

Dear Sir/Madam:

In accordance with 40 CFR 63.1206(c)(3)(vi), the Norlite, LLC (Norlite) is submitting an "Excessive Exceedance Report" for the timeframe of 08/28/14 thru 10/01/14. The attached document explains each of the "malfunctions" for Kilns One and Two.

The results of the investigation concluded a majority of the waste feed cutoffs were a result of the span limit associated with the stack gas flow monitor. The stack gas cutoffs were attributed to water droplets coming from the scrubber system contacting the stack gas probe and causing the probe to fault. Attempts were made to adjust the ID fan speed to combat the water droplet movement without significant success. Kiln 2 was brought down on September 23, 2014 to address scrubber issues but nothing was found out of place. Kiln 2 was brought down again on September 30, 2014 to conduct a more intensive inspection of the scrubber and baghouse systems to identify issues and conduct repairs.

Norlite has been working to resolve stack gas span cutoffs in general for almost two years. Norlite has been working with the DEC to install a new optical flow technology to monitor stack gas flow rate. A test unit has been installed on Kiln 1 and RATA tested on November 26, 2013. The final RATA Testing report was submitted along with a proposal for implementing official use of the unit to the DEC on December 24, 2013. Norlite prepared and submitted a permit modification request to the Department on March 25, 2014 and received approval for the permit modification on April 16, 2014. On April 18, 2014 at 1:00 PM, Norlite placed the Optical Flow Sensor for Kiln 1 into certified operation. Since April 18th, there have been no stack gas flow rate cutoffs which have occurred on Kiln 1. The previous stack gas flow rate measuring technology has remained in place for data collection but is no longer part of the AWFCO system. Since receiving approval for the Kiln 1 permit modification, Norlite has ordered and installed an optical flow sensor on Kiln 2. On May 27th, Norlite conducted preliminary testing and data collection on the Kiln 2 unit to further help setup and troubleshooting. Norlite believes to have the issues which were affecting the optical flow sensor resolved at this point and have setup a RATA testing for September 23, 2104. Once passing RATA results are obtained, Norlite will prepare a permit modification similar to the Kiln 1 permit modification for submittal and approval for Kiln 2.



NORLITE, LLC

Norlite has been working with the DEC to improve LGF delivery and handling at the kilns to address these types of cutoffs. In April 2013, the DEC conditionally approved Norlite's plan to remove the minimum LGF Line Pressure requirement, allow a positive displacement pump to be used for fuel flow control, and allow the use of a recirculation line for use during times when off LGF. The DEC also requested a six month study be conducted without a minimum LGF Line Pressure requirement. The study was started on May 01, 2013 and completed on October 31, 2013. Norlite conducted an extensive search for a positive displacement pump which would allow variable speed control, have tight pump tolerance, and have suitable reliability for long term use. The results of the six month study which summarized over 4 million lines of operational data between the two kilns was submitted to the DEC on December 5, 2013. Based from the results of the six month study, Norlite feels the data supports the removal of the minimum LGF Line Pressure requirement. Norlite has concluded that a positive displacement pump which meets all the needed criteria does not exist. As stated previously, Norlite has acquired the assistance of a process engineering firm to assist in the search for a suitable positive displacement pump and conduct an overall review of the entire kiln feed system to provide a proposal for improving the kiln fuel feed system. The process engineering firm has been supplied with facility drawings, had several discussions with Norlite personnel, and taken a facility tour to better understand the facility operations as they relate to fuel delivery at the kilns. Norlite submitted a proposal provided by SPEC Engineering to the DEC on December 31, 2013 for review and approval. The proposal was to use an automated control loop to control pressures and fuel flow rates at the kilns. On January 13, 2014, the DEC approved the overall concept of the proposal with the requirement that additional engineering specifications be provided by certain dates for ultimate approval of the entire project.

Norlite and SPEC Engineering have completed an extensive hydraulic study of the entire LGF Fuel delivery system to ensure that proper velocities can be maintained throughout the piping system to prevent material buildup and keep the LGF homogeneously mixed. Norlite and SPEC Engineering have also met with the DEC or spoke with the DEC on the phone several times to go over the hydraulic study as well as keep the Department up to date on the overall progress of the project. Norlite and SPEC Engineering are in the final phase of the engineering design of the overall kiln fuel delivery system, including 3D drawings of the piping to help visualize the overall project. Norlite and SPEC have confirmed their commitment to ensuring the kiln fuel delivery system operates as expected with as few troubleshooting issues as possible. For this to occur, additional engineering has been needed during the current design phase. Norlite met with the DEC in early April to go over the fuel piping layout and other related engineering design aspects. Norlite and SPEC have finalizing the engineering designs. SPEC has completed bid packages for review by Norlite Engineering. Once engineering has reviewed the bid packages, they will go out to several vendors for prices. SPEC is also preparing a final engineering package to be submitted shortly for DEC review and approval. When the DEC reviews the engineering design, Norlite will continue with procurement and installation.

All of the malfunctions that occurred were consistent with our Startup, Shutdown and Malfunction Plan (SSMP). As approved by the NYSDEC on February 6, 2006, these reports are being sent electronically.

Should you have any questions regarding this letter, please contact me at (518) 235-0401 or email at: tom.vanvranken@tradebe.com.

Sincerely,

Thomas Van Vranken

Thomas Van Vranken
Environmental Manager

Attachments

ecc: Don Spencer, NYDEC – R4 w/attachments
Thomas Killeen, NYSDEC – CO w/attachments
Joseph Hadersbeck, NYSDEC – R4w/attachments
Jim Quinn, NYSDEC – R4 w/attachments
Tita LaGrimas – Tradebe



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
08/28/14 - 10/01/14

| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|---|-----------------------|-------|---|
| 8/29/2014 | 18:53:31 | 8/29/2014 | 18:55:08 | 0:01:37 | 177 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to a Faulty Temperature Probe | Baghouse Inlet Temp. | Span | I&E Replaced the Probe and Calibrated It to Ensure Proper Operation on 09/01/14 |
| 8/30/2014 | 4:30:33 | 8/30/2014 | 4:31:19 | 0:00:46 | 178 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to a Faulty Temperature Probe | Baghouse Inlet Temp. | Span | I&E Replaced the Probe and Calibrated It to Ensure Proper Operation on 09/01/14 |
| 8/31/2014 | 8:55:36 | 8/31/2014 | 9:02:23 | 0:06:47 | 179 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Rate Span Due to the Operator Increasing the Flow Rate to Help Flush the Scrubber System | Scrubber Recirc. Rate | Span | The Operator Reduced the Flow Rate So the Span Limit Cannot be Reached |
| 9/1/2014 | 17:45:45 | 9/1/2014 | 17:46:04 | 0:00:19 | 180 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the pH Probe Becoming Coated With Soda Ash Solids | Scrubber pH | Span | I&E Cleaned the Probe and Recalibrated It to Ensure Proper Operation |
| 9/1/2014 | 21:49:45 | 9/1/2014 | 21:50:07 | 0:00:22 | 181 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to a Faulty Temperature Probe | Baghouse Inlet Temp. | Span | I&E Replaced the Probe and Calibrated It to Ensure Proper Operation |
| 9/2/2014 | 6:08:07 | 9/2/2014 | 6:08:25 | 0:00:18 | 182 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Intermittent Lime Flow From a Faulty Blower. The Intermittent Lime Flow Caused the Soda Ash System to Activate More to Adjust pH | Scrubber pH | Span | Mechanics and I&E Conducted Troubleshooting on the pH System For Several Hours Before Determining the Lime System Was the Issue |
| 9/2/2014 | 6:19:09 | 9/2/2014 | 6:19:29 | 0:00:20 | 183 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/2/2014 | 6:49:39 | 9/2/2014 | 6:49:57 | 0:00:18 | 184 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/2/2014 | 8:21:10 | 9/2/2014 | 8:21:58 | 0:00:48 | 185 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
08/28/14 - 10/01/14

| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|----------|----------|----------|-----|-------------|---|---------------------------|-------|--|
| 9/2/2014 | 12:02:40 | 9/2/2014 | 12:03:02 | 0:00:22 | 186 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Intermittent Lime Flow From a Faulty Blower. The Intermittent Lime Flow Caused the Soda Ash System to Activate More to Adjust pH | Scrubber pH | Span | Mechanics and I&E Conducted Troubleshooting on the pH System For Several Hours Before Determining the Lime System Was the Issue |
| 9/2/2014 | 20:44:03 | 9/2/2014 | 21:02:09 | 0:18:06 | 187 | Malfunction | The Upper Limit for the Rear Chamber Pressure Was Met Due to Kiln 2 Being Down for Maintenance and the Automated Chamber Valve Opening, Causing a Draft for Kiln 2 to Occur | Back Chamber Pressure HRA | Opl | During the Kiln 2 Maintenance, the Nitrogen Line Was Shutoff Which Caused the Automated Valve to Open and Pull Draft From Kiln 2 |
| 9/3/2014 | 18:43:14 | 9/3/2014 | 18:45:43 | 0:02:29 | 188 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/3/2014 | 20:58:26 | 9/3/2014 | 20:59:18 | 0:00:52 | 189 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/3/2014 | 21:15:02 | 9/3/2014 | 21:15:29 | 0:00:27 | 190 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/4/2014 | 13:58:48 | 9/4/2014 | 14:20:31 | 0:21:43 | 191 | Malfunction | The Upper Limit for the Rear Chamber Pressure Was Met Due to Kiln 2 Being Down for Maintenance and the Automated Chamber Valve Opening, Causing a Draft for Kiln 2 to Occur | Back Chamber Pressure | Span | During the Kiln 2 Maintenance, the Nitrogen Line Was Shutoff Which Caused the Automated Valve to Open and Pull Draft From Kiln 2 |
| 9/4/2014 | 18:55:01 | 9/4/2014 | 18:55:23 | 0:00:22 | 192 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/4/2014 | 20:18:21 | 9/4/2014 | 20:18:40 | 0:00:19 | 193 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
08/28/14 - 10/01/14

| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|----------|----------|----------|-----|-------------|---|-----------------------|-------|---|
| 9/4/2014 | 20:30:23 | 9/4/2014 | 20:30:52 | 0:00:29 | 194 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/4/2014 | 21:43:57 | 9/4/2014 | 21:44:16 | 0:00:19 | 195 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/5/2014 | 1:56:50 | 9/5/2014 | 1:57:09 | 0:00:19 | 196 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/5/2014 | 2:50:50 | 9/5/2014 | 2:51:08 | 0:00:18 | 197 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/5/2014 | 4:56:02 | 9/5/2014 | 4:56:20 | 0:00:18 | 198 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/5/2014 | 10:45:01 | 9/5/2014 | 10:47:24 | 0:02:23 | 199 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/5/2014 | 17:39:15 | 9/5/2014 | 17:42:47 | 0:03:32 | 200 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Rate Span Due to a Pocket of Air In the Line to Cause a False High Flow Reading | Scrubber Recirc. Rate | Span | The WWTP Mechanic Had Just Cleaned the Filter Baskets Which Would Have Introduced Air Into the Line |
| 9/6/2014 | 6:15:41 | 9/6/2014 | 6:16:51 | 0:01:10 | 201 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/7/2014 | 6:03:18 | 9/7/2014 | 6:03:44 | 0:00:26 | 202 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
08/28/14 - 10/01/14

| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|----------|----------|----------|-----|-------------|---|----------------------|-------|---|
| 9/7/2014 | 8:45:39 | 9/7/2014 | 8:46:01 | 0:00:22 | 203 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/7/2014 | 10:41:26 | 9/7/2014 | 10:41:43 | 0:00:17 | 204 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/7/2014 | 13:56:32 | 9/7/2014 | 13:56:51 | 0:00:19 | 205 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/7/2014 | 22:20:54 | 9/7/2014 | 22:22:02 | 0:01:08 | 206 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/7/2014 | 22:55:16 | 9/7/2014 | 22:55:38 | 0:00:22 | 207 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/8/2014 | 0:16:06 | 9/8/2014 | 0:16:27 | 0:00:21 | 208 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/8/2014 | 1:36:07 | 9/8/2014 | 1:36:28 | 0:00:21 | 209 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/8/2014 | 1:39:16 | 9/8/2014 | 1:39:34 | 0:00:18 | 210 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/8/2014 | 1:45:20 | 9/8/2014 | 1:45:41 | 0:00:21 | 211 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
08/28/14 - 10/01/14

| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|---|-----------------------|-------|---|
| 9/8/2014 | 1:50:05 | 9/8/2014 | 1:50:40 | 0:00:35 | 212 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/8/2014 | 2:25:07 | 9/8/2014 | 2:55:40 | 0:30:33 | 213 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/9/2014 | 4:05:12 | 9/9/2014 | 4:05:32 | 0:00:20 | 214 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/12/2014 | 21:23:39 | 9/12/2014 | 21:24:01 | 0:00:22 | 215 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/13/2014 | 4:39:13 | 9/13/2014 | 4:41:27 | 0:02:14 | 216 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/13/2014 | 5:41:03 | 9/13/2014 | 5:41:25 | 0:00:22 | 217 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/15/2014 | 3:33:41 | 9/15/2014 | 3:34:30 | 0:00:49 | 218 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/17/2014 | 2:03:31 | 9/17/2014 | 2:03:51 | 0:00:20 | 219 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Baghouse Inlet Temperature Span Due to an Intermittent Contact Issue on the PLC Input Card. The Intermittent Nature of the Problem Further Aggravated the Issue | Baghouse Inlet Temp. | Span | I&E Conducted Troubleshooting For Several Day In An Attempt to Locate the Issue |
| 9/18/2014 | 3:29:03 | 9/18/2014 | 3:29:29 | 0:00:26 | 220 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Rate Span Due to the Operator Increasing the Flow Rate to Help Flush the Scrubber System | Scrubber Recirc. Rate | Span | The Operator Reduced the Flow Rate So the Span Limit Cannot be Reached |
| 9/21/2014 | 13:11:08 | 9/21/2014 | 13:13:23 | 0:02:15 | 221 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Sample Loop Being Plugged With Soda Ash Solids | Scrubber pH | Span | I&E Cleaned the Sample Loop |



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
08/28/14 - 10/01/14

| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|---|-----------------------------|-------|---|
| 9/24/2014 | 8:37:17 | 9/24/2014 | 9:51:17 | 1:14:00 | 222 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Flow Rate Span Due to The Optical Flow Sensor Becoming Dirty and Losing Signal | Stack Gas Flow Rate | Span | I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Will Come Down for Maintenance on 10/06/14 |
| 9/24/2014 | 12:06:06 | 9/24/2014 | 12:06:58 | 0:00:52 | 223 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Sample Loop Being Plugged With Soda Ash Solids | Scrubber pH | Span | I&E Cleaned the Sample Loop |
| 9/24/2014 | 12:27:39 | 9/24/2014 | 12:28:14 | 0:00:35 | 224 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Sample Loop Being Plugged With Soda Ash Solids | Scrubber pH | Span | I&E Cleaned the Sample Loop |
| 9/26/2014 | 0:08:22 | 9/26/2014 | 0:23:14 | 0:14:52 | 225 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Flow Rate Span Due to The Optical Flow Sensor Becoming Dirty and Losing Signal | Stack Gas Flow Rate | Span | I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Will Come Down for Maintenance on 10/06/14 |
| 9/28/2014 | 21:26:30 | 9/28/2014 | 22:09:11 | 0:42:41 | 226 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Flow Rate Span Due to The Optical Flow Sensor Becoming Dirty and Losing Signal | Stack Gas Flow Rate | Span | I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Will Come Down for Maintenance on 10/06/14 |
| 9/29/2014 | 9:18:18 | 9/29/2014 | 9:19:28 | 0:01:10 | 227 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Flow Rate Span Due to The Optical Flow Sensor Becoming Dirty and Losing Signal | Stack Gas Flow Rate | Span | I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Will Come Down for Maintenance on 10/06/14 |
| 9/29/2014 | 23:04:28 | 9/29/2014 | 23:08:08 | 0:03:40 | 228 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Scrubber Recirc. Tank Level Span Due to A PLC Fault Which Caused A Loss of Reading for this Parameter | Scrubber Recirc. Tank Level | Span | I&E Cycled the PLC Power to Clear the Fault and Establish Proper Recirculation Tank Level Readings |
| 9/30/2014 | 13:35:28 | 9/30/2014 | 13:37:00 | 0:01:32 | 229 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Flow Rate Span Due to The Optical Flow Sensor Becoming Dirty and Losing Signal | Stack Gas Flow Rate | Span | I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Will Come Down for Maintenance on 10/06/14 |
| 9/30/2014 | 13:45:48 | 9/30/2014 | 13:54:08 | 0:08:20 | 230 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Flow Rate Span Due to The Optical Flow Sensor Becoming Dirty and Losing Signal | Stack Gas Flow Rate | Span | I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Will Come Down for Maintenance on 10/06/14 |



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| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|--|---------------------------------------|-------|--|
| 8/28/2014 | 4:15:51 | 8/28/2014 | 5:01:30 | 0:45:39 | 246 | Malfunction | Communication Was Lost Between the Input Card and the PLC Which Caused the Backend Temperature to Fault, Triggering the Instantaneous Upper Instrument Setpoint to be Reached for Backend Temperature Span | Backend Temperature | Span | I&E Cleaned the Contacts and Re seated the Input Card to Reestablish Communications |
| 8/28/2014 | 11:07:03 | 8/28/2014 | 11:07:36 | 0:00:33 | 247 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 8/28/2014 | 11:07:40 | 8/28/2014 | 11:08:25 | 0:00:45 | 248 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 8/28/2014 | 19:21:48 | 8/28/2014 | 19:22:15 | 0:00:27 | 249 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 8/28/2014 | 19:22:20 | 8/28/2014 | 19:22:43 | 0:00:23 | 250 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 8/29/2014 | 3:17:15 | 8/29/2014 | 3:17:39 | 0:00:24 | 251 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 8/29/2014 | 3:17:44 | 8/29/2014 | 3:18:01 | 0:00:17 | 252 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |



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| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|--|--|-------|--|
| 8/29/2014 | 4:12:49 | 8/29/2014 | 4:13:08 | 0:00:19 | 253 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | Opl | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 9/1/2014 | 1:50:15 | 9/1/2014 | 2:00:48 | 0:10:33 | 254 | Malfunction | A Crack Formed In the Fan Housing On Kiln 2 Which Supplies Draft to the Rear Chamber System, Reducing the Efficacy of the Entire System and Causing the Upper Limit for Rear Chamber System Pressure to be Reached | Back Chamber Pressure, 1 Second Delay | | A Temporary Patch Was Placed Over the Crack Until a New Fan Housing Could Be Manufactured. A Weld of the Crack Was Attempted On 8/22/14 But Did Not Work |
| 9/1/2014 | 4:08:34 | 9/1/2014 | 5:05:13 | 0:56:39 | 255 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend and Rear Chamber Differential Kiln Pressure / High CO's | Simultaneous Front and Back Chamber Pressure | | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/6/2014 | 12:42:15 | 9/6/2014 | 12:43:19 | 0:01:04 | 256 | Malfunction | The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span | LGF Flow | | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/9/2014 | 19:20:50 | 9/9/2014 | 19:33:00 | 0:12:10 | 257 | Malfunction | The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span / Tank Switch | LGF Flow | Span | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/11/2014 | 7:41:08 | 9/11/2014 | 7:41:47 | 0:00:39 | 258 | Malfunction | The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span | LGF Flow | Span | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/12/2014 | 9:57:16 | 9/12/2014 | 10:02:57 | 0:05:41 | 259 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/12/2014 | 23:06:27 | 9/12/2014 | 23:44:03 | 0:37:36 | 260 | Malfunction | The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span | LGF Flow | Span | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/14/2014 | 6:24:24 | 9/14/2014 | 6:24:51 | 0:00:27 | 261 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |



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| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|--|-------------------------------------|-------|---|
| 9/14/2014 | 6:24:56 | 9/14/2014 | 6:25:17 | 0:00:21 | 262 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure | Front Kiln Pressure, 1 Second Delay | Opl | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/15/2014 | 11:16:47 | 9/15/2014 | 11:18:19 | 0:01:32 | 263 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure | Front Kiln Pressure, 1 Second Delay | Opl | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/15/2014 | 11:19:33 | 9/15/2014 | 12:31:16 | 1:11:43 | 264 | Malfunction | Previous Front Kiln Pressure Cutoff Caused the CO's to Rise | Carbon Monoxide | Opl | Switched to Used Oil and Waited for the HRA to Come Down |
| 9/17/2014 | 21:29:30 | 9/17/2014 | 21:59:13 | 0:29:43 | 265 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/18/2014 | 5:32:59 | 9/18/2014 | 5:55:37 | 0:22:38 | 266 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/18/2014 | 6:20:32 | 9/18/2014 | 6:21:53 | 0:01:21 | 267 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/18/2014 | 6:41:16 | 9/18/2014 | 6:46:10 | 0:04:54 | 268 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/19/2014 | 1:47:31 | 9/19/2014 | 1:47:50 | 0:00:19 | 269 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure | Front Kiln Pressure, 1 Second Delay | Opl | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/19/2014 | 3:10:56 | 9/19/2014 | 3:12:08 | 0:01:12 | 270 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/19/2014 | 3:18:30 | 9/19/2014 | 3:43:29 | 0:24:59 | 271 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe / I & E Cleaned the Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/19/2014 | 4:00:34 | 9/19/2014 | 4:26:47 | 0:26:13 | 272 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |



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| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|---|-------------------------------------|-------|---|
| 9/19/2014 | 4:36:48 | 9/19/2014 | 4:38:40 | 0:01:52 | 273 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/20/2014 | 5:37:58 | 9/20/2014 | 5:38:26 | 0:00:28 | 274 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The ID Fan Speed Was Decreased to Help Prevent Water Droplets From Hitting the Probe |
| 9/20/2014 | 5:38:31 | 9/20/2014 | 5:39:26 | 0:00:55 | 275 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure | Front Kiln Pressure, 1 Second Delay | Opl | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/20/2014 | 21:24:24 | 9/20/2014 | 21:24:41 | 0:00:17 | 276 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span | LGF Flow | Span | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/20/2014 | 21:24:44 | 9/20/2014 | 21:25:29 | 0:00:45 | 277 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span | LGF Flow | Span | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/20/2014 | 21:25:46 | 9/20/2014 | 21:26:09 | 0:00:23 | 278 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span | LGF Flow | Span | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/21/2014 | 22:25:58 | 9/21/2014 | 22:40:34 | 0:14:36 | 279 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/22/2014 | 6:00:55 | 9/22/2014 | 6:01:59 | 0:01:04 | 280 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/22/2014 | 6:04:49 | 9/22/2014 | 6:24:10 | 0:19:21 | 281 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/22/2014 | 7:46:23 | 9/22/2014 | 7:46:58 | 0:00:35 | 282 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/22/2014 | 9:56:33 | 9/22/2014 | 9:56:55 | 0:00:22 | 283 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |



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| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|--|---------------------|-------|---|
| 9/22/2014 | 9:58:25 | 9/22/2014 | 10:01:46 | 0:03:21 | 284 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/22/2014 | 10:05:14 | 9/22/2014 | 10:05:38 | 0:00:24 | 285 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/22/2014 | 10:17:08 | 9/22/2014 | 10:19:14 | 0:02:06 | 286 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/23/2014 | 1:58:19 | 9/23/2014 | 2:14:50 | 0:16:31 | 287 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/23/2014 | 2:16:16 | 9/23/2014 | 2:23:15 | 0:06:59 | 288 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/23/2014 | 2:25:39 | 9/23/2014 | 2:57:22 | 0:31:43 | 289 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/23/2014 | 3:05:39 | 9/23/2014 | 3:17:06 | 0:11:27 | 290 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/23/2014 | 7:18:36 | 9/23/2014 | 10:03:58 | 2:45:22 | 291 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/23/14 for Scrubber Maintenance But No Problems Were Found |
| 9/25/2014 | 1:15:03 | 9/25/2014 | 1:19:56 | 0:04:53 | 292 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |
| 9/25/2014 | 4:16:39 | 9/25/2014 | 4:25:36 | 0:08:57 | 293 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |
| 9/25/2014 | 4:29:18 | 9/25/2014 | 4:41:17 | 0:11:59 | 294 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |



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| Start Date | Start Time | End Date | End Time | Downtime | # | Event | Cause | Parameter | Limit | Corrective Action |
|------------|------------|-----------|----------|----------|-----|-------------|--|-------------------------------------|-------|---|
| 9/25/2014 | 4:48:08 | 9/25/2014 | 6:00:54 | 1:12:46 | 295 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |
| 9/25/2014 | 6:16:05 | 9/25/2014 | 9:05:44 | 2:49:39 | 296 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe / Rinsed the Mist Pad | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |
| 9/26/2014 | 20:40:33 | 9/26/2014 | 20:41:28 | 0:00:55 | 297 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |
| 9/27/2014 | 7:18:36 | 9/27/2014 | 7:20:35 | 0:01:59 | 298 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure | Front Kiln Pressure, 1 Second Delay | Opl | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/27/2014 | 13:33:51 | 9/27/2014 | 13:39:08 | 0:05:17 | 299 | Malfunction | The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure | Front Kiln Pressure, 1 Second Delay | Opl | Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements |
| 9/29/2014 | 9:13:43 | 9/29/2014 | 10:35:14 | 1:21:31 | 300 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe / Rinsed Mist Pad | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |
| 9/30/2014 | 22:01:08 | 9/30/2014 | 22:06:07 | 0:04:59 | 301 | Malfunction | Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe | Stack Gas Flow Rate | Span | The Kiln Was Brought Down on 09/30/14 to Inspect and Repair the Scrubber and Baghouse Systems |